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MINN.

1910

PLANTER'S
GUIDE

Evergreens That Live

WEDGE
NURSERY

Fruit Trees That Bear



PACKING HOUSES OF THE WEDGE NURSERY AS SEEN FROM THE HIGHWAY

Planter's Guide

PUBLISHED BY THE

WEDGE
NURSERY

ALBERT LEA, MINN.

CLARENCE WEDGE
ROBT. C. WEDGE

SIMONSON, WHITCOMB & HURLEY CO., PRINTERS

Albert Lea, Minnesota

FRUITS FOR MINNESOTA PLANTING

Adopted by the Minnesota State Horticultural Society for
the Guidance of Planters in Minnesota

APPLES

Of the first degree of hardiness: Duchess, Hibernial, Patten's Greening, Okabena.

Of the second degree of hardiness: Wealthy, Malinda, Anisim, Iowa Beauty, University.

Most profitable varieties for commercial planting in Minnesota: Wealthy, Duchess, Patten's Greening, Okabena, Anisim.

Varieties for trial: Salome, Eastman, Milwaukee, Newell's, Lowland Raspberry, Jewell's Winter, Evelyn, Windsor Chief, Superb.

Valuable in some locations: Wolf River, McMahon, Yellow Transparent, Longfield, Northwestern Greening, Charlamoff, Tetofsky.

CRABS AND HYBRIDS

For general cultivation: Florence, Whitney, Early Strawberry, Minnesota, Sweet Russet, Transcendent.

PLUMS

For general cultivation: DeSoto, Surprise, Forest Garden, Wolf (freestone), Wyant, Stoddard.

Most promising for trial: New Ulm, Brittlewood, Compass, Cherry, Terry.

GRAPES

First degree of hardiness: Beta, Janesville.

Second degree of hardiness: Moore's Early, Campbell's Early, Brighton, Delaware, Worden, Agawam, Concord, Moore's Diamond.

RASPBERRIES

Red varieties: King, Turner, Miller, Loudon, Minnetonka Ironclad.

Black and purple varieties: Palmer, Nemaha, Gregg, Older, Columbian, Kansas, Cumberland.

BLACKBERRIES

Ancient Briton, Snyder, Eldorado.

CURRENTS

White Grape, Victoria, Long Bunch Holland, Pomona, Red Cross, Perfection, London Market.

GOOSEBERRIES

Houghton, Downing, Champion, Pearl, Carrie.

STRAWBERRIES

Perfect varieties: Bederwood, Enhance, Lovett, Splendid, Glen Mary, Clyde, Senator Dunlap.

Imperfect varieties: Crescent, Warfield, Haverland, Marie.

NATIVE FRUITS

Valuable for trial: Dwarf Juneberry, Sand Cherry, Buffalo Berry, High Bush Cranberry.

PLANTER'S GUIDE

We publish this booklet of information for the instruction and guidance of those who plant trees, fruits or flowers in the North Mississippi Valley, where the authors have had a life-time experience. Plants of all kind behave differently and require very different treatment in other climates and situations. We do not attempt to give advise to those living outside the great region extending from Lake Michigan to the Rocky Mts., and from Missouri to Lake Winnipeg. But we have had extensive experience and travel within this territory and endeavor to give the readers of this booklet the benefit of what we have learned in as clear, unprejudiced and simple a manner as possible, hoping and believing that it will prove a safe and reliable guide to the beginner, and contain suggestions of value to the professional horticulturists.

A Valuable Fruit List. On the opposite page we print the fruit list adopted by the Minnesota State Horticultural Society after careful consideration, and by an almost unanimous vote. This is the largest and most influential horticultural society in the United States, having a membership of over 3,000, and being centrally located in the region above described, its recommendations have become a standard authority on varieties adapted to general planting. From this list we have selected the kinds that seem to be giving the greatest satisfaction

and described them carefully and impartially, giving their faults as well as their merits. Trees, as well as men, have their faults and weaknesses, which it is best to understand and perhaps provide against at the start, rather than to discover after years of labor have been bestowed upon them.

Up-to-Date Suggestions. The description of the varieties and the directions for their planting are newly written each year and represent our latest experience in the orchard and nursery, together with such ideas as we are able to get from horticultural meetings and farmers' institutes. Our aim is to make this annual something that every planter in the North will consider worth reading and worth preserving.

Where to Plant. Plant in land that would grow any of the common farm crops. There is scarcely a tree or plant that will do its best in land too low or wet to yield a good crop of corn or potatoes. The elm and willow may live in pretty wet places, but they will always do better on good farm soils. A fruit tree is expected to do something more than merely exist. We want them to thrive and bring forth fruit, and so we must give them a good chance where they can do their best. By keeping in mind the needs of a good farm crop, the orchard or berry patch will not be placed beneath or near large cottonwoods or willows, will not be planted on a gravel knoll, and will be given the protection from live stock that is given to the farm crop. Other things being equal almost everything does better on a northerly slope than on any other. Some of the best orchards in the country

are situated on bluffs with a northerly slope so steep as to make them unfit for general agricultural purposes.



HIBERNAL APPLES GROWN IN WALSH COUNTY, NORTH DAKOTA

However, we find good orchards and gardens on level land and on land sloping in all directions, so that no

one need doubt their ability to make a success whatever the slope of their land, if only they have a soil that will raise a good farm crop and will give the trees proper attention.

When to Plant. In the moister air of the Eastern Coast states many things can be better planted in the fall than in the spring, but in our section the things that are safe to plant in any other months than April and May can be told on the fingers of one hand, and most of these will also do well with spring planting. Stock received in the fall should be carefully buried, root and branch, undoing the package in which it is shipped, breaking all bundles apart, and working in the soil about each root as carefully as when planting to stay. After filling in the hole with dirt, and leaving the place exposed till frozen solid to the bottom, the ground should be mulched to keep it frozen till spring, when the trees can be taken out and set where they are to stay at the convenience of the planter.

How to Plant. All possible pains should be taken to prevent the roots of nursery stock from being exposed to the air for even a few minutes. One of the best methods is to dip the bundle in a tank or pool of water as soon as it has arrived, and opening in a shady, sheltered place heel in the roots in good, moist soil while the holes are being dug and the planting begun. The holes, which should be large enough to accommodate the roots without bending or bruising them, we prefer to dig as the trees are set, so that the soil will not lose its moisture by being exposed to the sun and wind. In planting,

place the tree in the hole a little deeper than it stood in the nursery.

A very convenient way of preventing exposure of the roots while carrying them from place where they are heeled in, is to prepare a pail or small box of mud and placing it in a wheelbarrow use it to convey a portion of the trees with their roots immersed in the mud to the planting ground, where they may be taken out one at a time as they are needed without any exposure whatever.

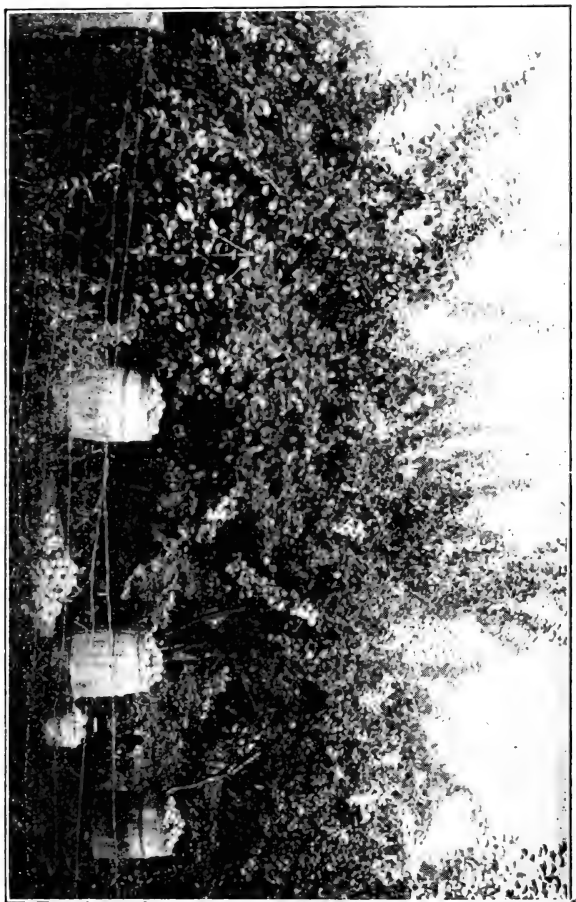
Stamping the Soil Firmly About the Roots Most Important Of All. Sift in fine, moist dirt among the roots, just enough so that the boot will not injure them, then with the heel and all the strength and weight at command stamp the earth until it is solid, fill in a little more dirt and repeat the stamping until the hole is nearly full, finishing with loose dirt, but leaving the tree standing in a sort of valley to catch the water and insure its settling down to the roots. A tree thus firmly set cannot be pulled up without breaking the roots, and this general rule applies to everything from a strawberry plant to a shade tree. We prefer this way of setting to the use of water as in that case it is impossible to pack the dirt so solid about the roots.

Soil Should Be Left Sloping Toward the Tree. If trees must be planted in the grass, holes as large around as a wagon wheel and 18 inches deep should be dug for each tree, and as the planting is finished the ground should be left sloping toward the tree for some three feet in all directions so as to catch and turn towards it all the water that falls in its vicinity. When the planting is

finished, a mulch six inches deep of straw or coarse manure should be spread about the tree for a distance of at least three feet from its stem to keep the ground moist and the grass and weeds from growing near it.

When the trees and bushes are all properly planted they should be carefully pruned by removing all unnecessary branches and about half the growth of the previous season. This is very important in order to preserve a balance between the root and top, and in the case of most bushes should be done so thoroughly as to leave but little above the surface. The foregoing directions for pruning do not apply to evergreens.

It is the aim of the following pages to assist the planter in choosing the varieties best suited to his taste and condition. Those living north of the latitude of St. Paul will find hardiness or ability to resist cold one of the most important considerations in making a selection. To aid in this matter we have marked such varieties of trees and plants as are especially adapted to severe conditions with a *. There is much controversy as to the best sized tree to plant, some contending that a small tree is better and safer than a large one, and others arguing for the larger sizes. We have succeeded with all sizes, and think good care and cultivation are of vastly more importance than the size of the tree used for planting. In evergreens nothing is gained by planting trees over three feet, and the best size is usually about 18 to 24 inches.



A. P. STEPHENSON'S ORCHARD, NELSON, MANTOBA, PRODUCING SEVENTY BARRELS IN 1905

APPLES

One Manitoba Orchard Produced 70 Bbls. of Apples in 1905. The fact that the southern portion of Minnesota produces a surplus of summer and fall apples, as many as 50 carloads being shipped out of Spring Valley in one season, and that there are many good small orchards as far

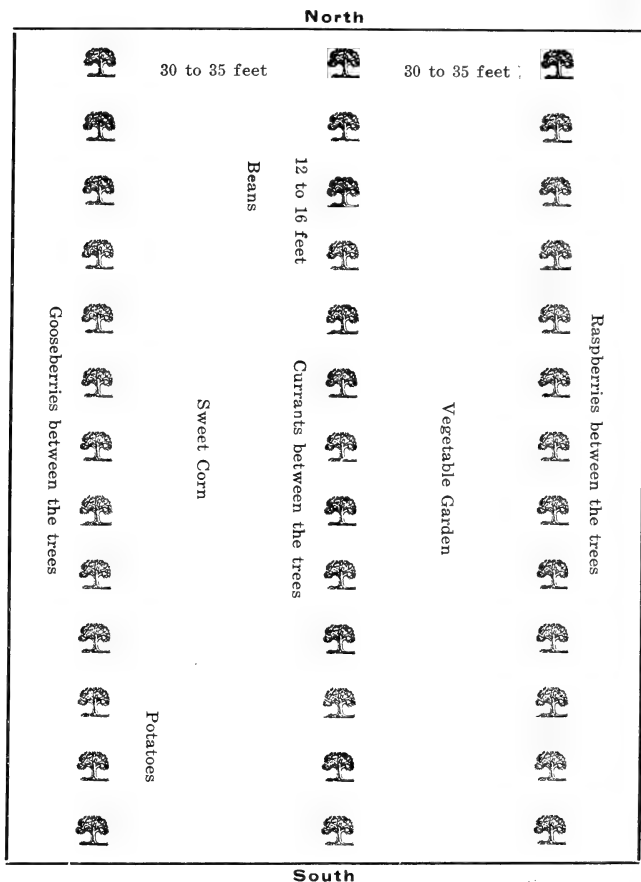
north as the latitude of Duluth, and that both standard apples and crabs were shown by five different exhibitors at a recent Manitoba fair held at Stonewall, nearly one hundred miles north of Minnesota should encourage every lover of a good home orchard to make a trial of the hardier varieties and the improved northern methods that have been developed within the past ten or twenty years. That there have been many failures in the past must be acknowledged, and it is also true that there will be many made in the future by those who fail to realize that they cannot succeed with the old Eastern and Southern varieties and methods, or with an orchard given up to grass and weeds, rabbits and live stock. But intelligent business sense and good care will now bring success as surely as in any other branch of agriculture, indeed for years past there have been no acres in our section of the state that have made as large a NET profit as the acres planted to apple orchards.

Those herein listed are so faithfully described that the most ignorant purchaser need not go astray. It is substantially the list recommended by the State Horticultural Society and at the Farmers' Institutes. They are all useful in the home orchard, but for commercial planting it is best to put out but few kinds, it being easier to market a large quantity of fruit of one well known variety, than to find a buyer for a mixed lot of apples.

A System of Planting With Many Advantages. We wish to call attention to a system of planting that is especially adapted to meet the needs of our northern climate and is being adopted more and more each year. It is so fully illustrated on page 14 that we will only call attention to some of its advantages.

The wide space between the rows gives an abundance of room for raising a crop of corn, beans or potatoes in a convenient and profitable way, the cultivation of which crop will nearly complete the cultivation of the orchard upon which its health and thrift so largely depends. A large orchard may be planted in this way without feeling the loss of the land which it occupies or the time required for its cultivation, until the trees themselves begin to make a return for the land and labor devoted to them. As the orchard comes into bearing this wide space becomes very useful in giving room for the operations of spraying, manuring, harvesting, etc., as well as affording a free circulation of air and an abundance of sunshine, both of which are very necessary to the proper ripening of the fruit. Our own orchard of over 2,000 trees is set in this way, and our ex-

A NORTHERN PLAN FOR SETTING AN ORCHARD



perience each year confirms our judgment in adopting the system.

As before suggested some cutting **Pruning Should** back should be done at planting time. **Be Attended to** We try so far as possible to preserve **in Good Season.** a central stem with limbs from it at proper intervals. As the tree grows, such branches as appear where they will be likely to chafe the main limbs as they develop, should be removed before they become larger than a lead pencil. Such light pruning is seldom or never injurious, but heavy pruning to accomplish this object on trees that have been neglected is very dangerous. The best time to prune fruit trees is about May 1st, just as the buds are swelling.

Anything that will shade the trunk **Sunscald May** or larger branches will prevent this **Be Prevented.** very common injury. It should be put on when the trees are set and maintained until the tree is shaded by its own branches. We are using a thin veneer of wood sawed about 12 by 24 inches and about 1-10 inch thick, which is also proving an excellent protection from rabbits and borers. A heavy wire screen that will protect from both sunscald, mice and rabbits and last a lifetime may also be had for about 8 cents. A cheap life insurance for a fruit tree.

All apple and crab trees are subject **Bilght a Disease** to this disease, but some varieties are **Without a** seldom or never seriously injured by **Practical** it, while others are rendered nearly **Remedy.** worthless by its ravages. Where we have described a variety as free from blight, we mean that it is seldom or never seriously in-

jured by it. A high and airy location for the orchard will do much to prevent the disease, but there is no known variety that is blight proof, and no treatment has so far been discovered that perfectly controls the disease.

There is an unfortunate prejudice among farmers against crooked apple trees; as a rule the varieties that grow crooked in a nursery make the best orchard trees as they are always the spreading growers that shade their own stems, and are not liable to split down when loaded with fruit. It is not at all necessary that a first-class tree should be straight and prettily branched. Some of the best varieties never grow that way, but are always crooked and gnarly in the nursery. Some nurseries will not grow such varieties at all as it costs more to raise them and the ignorant customer is almost sure to complain of them when they are delivered. The Hibernial, Patten's Greening and Malinda apples, and Earl Strawberry crab seldom make pretty trees, and should never be ordered by those who care more for a straight tree than they do for a hardy and valuable fruit.

In the description below we give the time that the fruit may be expected to keep, with careful intelligent care, in the house cellar. With careless handling and in a commercial way they will not be fit for use for near so long a season. Never put the fall and early winter varieties in the cellar immediately after picking; they will keep far better in open boxes or barrels in a cool shed until the approach of

freezing weather. It is especially important to observe this rule with the Hiberna and Patten's Greening.

We have not thought it worth while
A Select List of Varieties Described. to describe a long list of varieties. It doesn't pay to plant them. It is indeed one of the common mistakes to plant a little of everything and not enough of any one of the real good serviceable things. We have had hundreds of fruits and ornamental trees on trial, and in the following list endeavor to give our readers the benefit of our long and expensive experience. In introducing them and urging their merits we feel sure that we are saving our northern planters a great deal of expense and disappointment.

Varieties of extreme hardiness marked with *.

Tetofsky. Hardy and reasonably free from blight, very slow upright grower, medium early and heavy bearer in alternate years. Fruit medium size, yellow striped with red, fragrant, choice eating, but extremely perishable, about the earliest apple. Would be a very profitable market apple if the crop would hang to the tree till fully ripe. Season, August.

Lowland Raspberry. Moderately hardy, free from blight, very handsome, medium upright grower, moderately early and fair bearer. Fruit medium, beautifully shaded and spotted, mild acidity, generally agreed to be the finest dessert fruit among the early apples, and on this account deserves a place in the home orchard. Its season of ripening is remarkably long, some specimens ripening nearly a week before the Duchess, and a considerable quantity are generally left on the tree

after the Duchess is gone. A most popular variety with all who have tried it. Season, September.

Duchess.* Extremely hardy and free from blight, slow upright grower, medium early and very prolific bearer. Fruit large, handsomely striped, quite acid, fine for cooking even when half grown. This variety has been more largely planted and more generally successful than any other in the north. Keeps quite well in cold storage, but for this purpose or for shipping should be picked before becoming soft or fully ripe, which will usually make quite a saving in the fruit as when the crop is left to fully ripen a good share of it is likely to be blown off. Season, September.

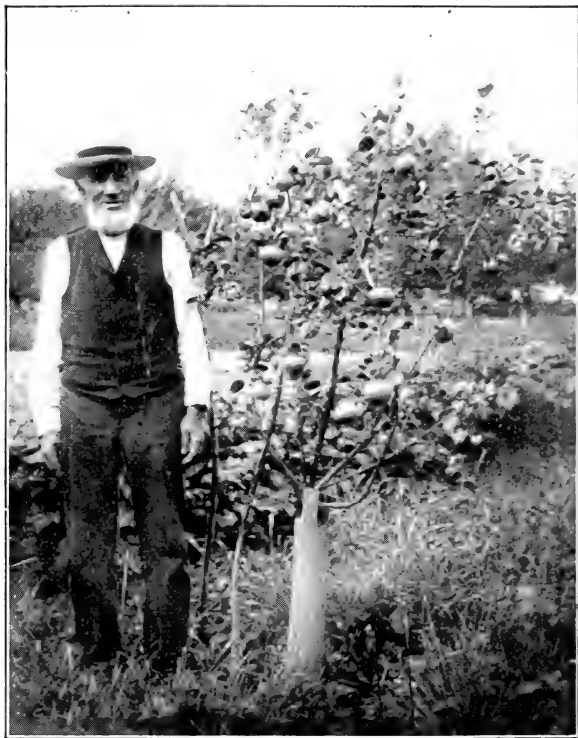
Iowa Beauty. Hardy, reasonably free from blight, strong very upright grower, moderately early and good bearer. Fruit large to very large, handsomely striped, of fine quality and appearance. In season it follows immediately after the Duchess. One of the varieties originating with Mr. Patten in north Iowa, who has done as much or more for this section than Burbank has for California. A variety that is slowly winning its way on its merits throughout the north. Season, September.

Okabena. Extremely hardy, free from blight, fine spreading grower, early and very prolific bearer. Fruit large, handsomely striped, acid, resembling the Duchess so closely that it can be sold for that variety on the market, and as it keeps at least a month longer it serves to prolong the season of that very popular home and market fruit. Originated at the home of Mr. H. J. Ludlow, Worthington, Minn. Deserves extensive planting. Season, September.

Hibernal.* Probably the hardiest apple known, blights but little, a thrifty spreading grower, very early and abundant bearer. Trees set but five years have borne with us a bushel each. Fruit large, rather irregular in form, handsomely striped, excellent for cooking and superior for pies, but pretty sour and somewhat astringent for eating. Not a good market variety, but of great value on account of its rugged iron-clad nature which fits it for planting even up in Manitoba. Also one of the best of all trees to top work with the more tender sorts, and is being largely used for that purpose. Season, September to November.

Patten's Greening.* Extremely hardy, free from blight even when planted among blighting kinds, a vigorous spreading grower, early and heavy bearer. Fruit very large, green when picked from the tree but changing to a beautiful yellow color in the cellar, a fairly good eating and superior cooking apple. One of the best showings that we have ever had in our orchards was a six year old tree of this variety that bore a barrel of apples. The most salable and profitable kind in our orchard thus far, selling well even when apples are plentiful. Without doubt is now standing next to the Wealthy in popularity in this state. Season, September to December.

Wealthy. Moderately hardy, subject to blight, and especially to sunscald, a strong upright grower, early and heavy bearer. Fruit medium to large, nearly covered with a beautiful waxy red. No apple can be found on our market that is equal in quality to the Wealthy as grown in Minnesota. This variety originated at Excelsior, Minn., over forty years ago, and although it has



A PATTEN'S GREENING TREE SET ONLY SIXTEEN MONTHS, BEARING
22 LARGE, FINE APPLES

killed back some in our severest winters, is to-day the most generally popular and profitable apple grown in the north. Season, September to January.

Anisim. Moderately hardy, remarkably free from blight, thrifty upright grower with fine well shouldered branches and an immense bearer. Fruit below medium size, skin somewhat rough but of richest red color, and good quality. For several seasons past this variety has made the handsomest show of any variety in our orchard and has just been promoted to the list of varieties for commercial planting by the Minn. State Horticultural society.

Northwestern Greening. Moderately hardy, reasonably free from blight, of strong medium upright growth, rather tardy but very prolific bearer. Fruit very large and exceedingly smooth and handsome, green turning yellow as it matures, of fine acidity for either eating or cooking. One of the best fruits on the list and doing well in many orchards, but can only be recommended for favorable locations in Southern Minnesota.

Malinda. Moderately hardy, free from blight, a thrifty spreading crab-like grower, very tardy but heavy bearer when it attains age. Fruit medium size, when fully ripe of a beautiful yellow frequently blushed, what is called, "sheep nose" shape, mild acid nearly sweet, and very much liked by most people. One of the few Northern varieties that hangs to the tree in spite of wind and weather till fully ripe. Worthy of a large place in every orchard in the southern part of the state as it is a true hard all winter keeper and is giving great satisfaction as a home fruit, to those who are fruiting it. Mr. T. E. Perkins of Red Wing, Minn., has produced some seedlings of the Malinda of superior excellence that we shall introduce within a year or two. Like their

parent, the apples are good keepers and hang to the tree till fully ripe. They are, however, a great improvement in size, color and quality, and have for years swept the boards at state fairs and horticultural meetings.

CRABS

SOUR, SUITABLE FOR COOKING.

Transcendent.* Extra hardy, a thrifty spreading grower, fairly early and immense bearer. Fruit too well known to need description. Ripens in September. Perishable.

Virginia. Extra hardy, much less subject to blight than the Transcendent, but more inclined to scab. Strong spreading grower, fairly early and fair bearer. Fruit larger than the Transcendent, bright red. Season, September. Will keep a month.

SUITABLE FOR DESSERT.

Early Strawberry.* Hardy, a thrifty spreading grower, early and heavy bearer. Fruit size of Transcendent, highly colored, ripens about September 1st; of tender delicious quality, but very perishable.

Whitney.* Hardy and doing very well hereabouts, of very handsome upright growth, as a bearer, varying much with soil and care but generally satisfactory. Fruit very large for a crab, handsomely striped and far superior to the Duchess as an eating apple. Ripens in September. Perishable.

Sweet Russet. Hardy, rather slow spreading grower, early and fine bearer. Fruit large, conical, yellow with slight russet. Ripens in September and keeps nearly a month. The late Wm. Somerville, the well known orchardist and institute worker, called this the best eating apple of the hundred varieties in his orchard.

PLUMS

There is no fruit likely to give such genuine satisfaction as our improved plums; they are literally "as hardy as an oak," begin to bear very soon after planting, bear only too abundantly, and finally the fruit, either for dessert or canning, will rival in excellence the product of any garden on earth. No farm or village home even in North Dakota or Montana need be without this luscious fruit, which is easier raised in our climate than peaches in New Jersey.

The plum seems to like a reasonably moist, rich soil. The trees should be planted in orchard sixteen by twenty feet apart. Should be allowed not more than three feet of stem, and little trimming or pruning except pinching back the rank, top-heavy growths. The orchard should be kept free from grass and sprouts and liberally mulched, manured and cultivated. The plum requires so little room that it is especially adapted to village lots, where its fragrant blossoms and refreshing fruit will be greatly enjoyed. One of the principal difficulties in raising the plum is the habit the trees have of setting too much fruit, sometimes almost more plums than leaves, in which case it is necessary to shake off

half or three-fourths of the fruit when the size of cherries. If this is neglected the fruit will be small and inferior, and the trees will not bear the next season. Our trees are all propagated on native stock, which is a matter of first importance in order to be sure of reliable trees. Most of the southern nurseries are using peach and other tender roots and thus spoiling the good reputation of this grand northern fruit.

DeSoto.* A standard variety. Prof. S. B. Green, of the university Experiment Station, says: "The crop of plums borne on our DeSoto trees was something astonishing. I wish every farmer in the state could have seen them." Tree of spreading habit; fruit mottled red, well grown specimens measuring $4\frac{1}{2}$ inches in circumference, flesh firm and peach-like. Trees must not be allowed to overbear.

Forest Garden. The chief value of this variety lies in the fact that it ripens a week or two before any other on the list. Of good size, sweet, and accounted the best early variety so far generally introduced.

Wolf.* A fine plum, ripening about the same time as the DeSoto, but differing in quality and resisting drouth perhaps the best of any variety. In some seasons it is a very perfect freestone, while in other years the pit clings slightly to the flesh. Dewain Cook, living on the prairies of Cottonwood county, considers this his best market variety.

Wyant.* A choice variety, that with us has proved a more reliable bearer of large, smooth, perfect fruit than any other we have tried. Flesh very firm and easily separated from the pit. Ripens a few days be-

fore DeSoto and seems destined to have almost as much popularity as that celebrated fruit.

Surprise. One of the newer varieties that is now generally regarded as about the best in quality. It is of large size, a bright red color, quite distinct from other varieties and will keep longer than most of our plums after it is ripe. Season, about with DeSoto.

Stoddard. A strong medium upright grower, reasonably hardy, and with age very productive. Fruit larger than DeSoto, nearly globular, rich colored, cling stone, flesh unusually firm, ripening after DeSoto. A valuable market variety.

Brittlewood. One of the largest and best of the new plums. A very spreading grower, early and good bearer, fine quality, cling stone. We especially recommend this choice variety as a decided improvement over the kinds that have been commonly planted.

Terry. In style of growth this is one of the handsomest of trees with bright shining leaves and upright branching, and sufficiently hardy for planting up to the latitude of St. Paul. Fruit probably the largest of any on the list, of bright red color and flesh firm, ripening early in September, cling stone. A variety that we particularly recommend as one of the best that can be planted.

CHERRIES

Cherries are beginning to come to the front in the north. And there seems to be no good reason why they should not, for they are grown in great quantities in Russia in a climate much colder than our own. The

proper way to grow cherries in a severe climate is to train them as bushes rather than as trees, and year by year allow a few new sprouts to come up at the base of the older stems, and, as the latter become feeble or diseased, cut them out and allow the young ones to take their places. Set the trees very deep, fully a foot deeper than they stood in the nursery. Lay out the orchard in rows 25 feet apart, and set the trees 10 feet apart in the row.

Homer. The only variety of the true cherry that has been grown in quantity in Minnesota. Near the little village of Homer, where it was originated, it has been in cultivation for over forty years, and has been grown and marketed in large quantities and proved its superiority over all the common kinds that have been carefully tested by its side. So successful has this variety been in this locality that it seems worthy of trial in favorable localities south of the latitude of St. Paul. Of a little later season than Early Richmond, and of larger size and better quality; otherwise much resembling this standard variety.

Compass.* This remarkable fruit, the result of a cross between the sand cherry and the Miner plum, originated with H. Knudson of Springfield, Minn. The tree is perfectly hardy, even in the far north, and seems especially adapted to the western prairies, very free from disease, and remarkably exempt from insect enemies and the depredations of birds; frequently bears the same year it is set, and quite certain to bear a good crop annually thereafter. The fruit, which looks much like a small plum, is of pleasant acidity as eaten out of hand and when cooked or canned makes a remarkably

fine rich-flavored sauce much resembling the cherry. There is no new thing that has come out in years that has given such uniform satisfaction and for which there is such a heavy demand.

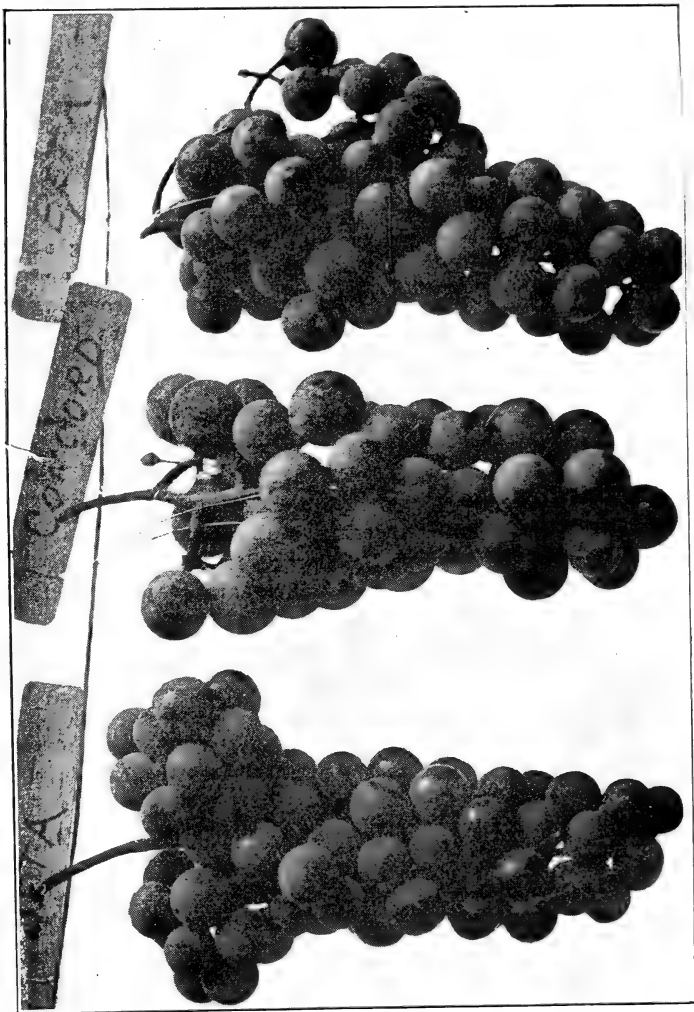
GRAPES

Grape. This is a fruit that on almost any good corn land can be grown as well here as in Iowa and Missouri, with the only additional expense of covering in winter, and with the great advance that has been made by the introduction of the iron clad Beta even this trouble has been done away with.

Vines should be set in long rows for convenience of cultivation, 8 feet apart in the row and rows also 8 feet apart. Plant deeply. For a trellis use three plain wires put up like a fence, but a little higher. Dirt makes the best winter covering, but manure will do. It is necessary that grapes be planted in a warm, sunny situation and well cultivated. The art of pruning is best learned by spending a little time in the vineyard of your nearest grape grower.

Moore's Early. A very large black grape of rich flavor and excellent quality. The standard early grape, and the only variety that has never failed to ripen with us. It is very hardy, and free from disease, but does not bear as heavy nor is it as vigorous in growth as could be desired.

Brighton. A fine-flavored red grape that ripens reasonably early, and has the great advantage that with



BUNCHES OF BETA AND CONCORD COMPARED

little trouble it can be stored in the cellar and kept about as well as apples.

Concord. Black, productive, rather late.

Beta. This new variety originated in Minnesota some twenty years ago and is proving the best all around grape for general planting, as it will stand our Minnesota winters without protection. A fine black grape of a size midway between the Delaware and Concord, that ripens the first of any and is very prolific and healthy. The quality, while superior for sauce and jellies, is not the best for eating from the hand, but even for this purpose it is far better and more wholesome than the grapes that are shipped to us from the east. Prof. Green, who has had a long experience with the variety and done much to bring it to public notice, has the following report of it in the Minnesota Horticulturist: "I am especially pleased with the Beta Grape as a variety for general planting, knowing, as I do, its great hardiness. The bunches are all good sized and very often shouldered. The fruit is medium in size, quite acid, but of good quality. Some of our vines have borne as much as 45 lbs. in one season." We unhesitatingly recommend the general planting of this variety. It marks the beginning of successful grape culture in the north.

CURRANTS

One of the old reliable fruits. A good way for farmers to grow currants and gooseberries is to plant about 6 feet apart each way, and mulch with sufficient straw to keep down all grass and weeds. The mulching

will keep the ground moist and favors the growth of the largest fruit. Part of the old wood should be cut out each fall. The currant worm may be controlled by dusting the bushes with white hellebore mixed with flour or slacked lime.

Red Dutch.* The old standard red that is agreed to be about the best variety of the old list.

White Grape.* A fine large sweet variety, still regarded the best of the white kinds.

Perfection. A beautiful bright red variety of remarkably large sized berry and bunch, and unlike most of the large varieties is getting a reputation as a heavy bearer. We have had specimens of this variety on our own table which measured considerably more than half an inch in diameter. The quality is excellent, a rich mild acid, with plenty of pulp and few seeds. This variety is the product of a cross between the white Grape and Fay currant, and appears to mark a great advance in this fruit. We consider this one of the best of the new things that have come to light in the past few years, and would not think of planting any other red currant in our own garden.

GOOSEBERRIES

A greatly neglected fruit. Nothing makes a finer sauce for winter use. For the acme of all rich things commend us to your mother's gooseberry pies. This with the currant, Compass cherry, and plum are ready to make themselves "at home" even in Manitoba, and

require no more attention than in the best fruit regions of the east. Culture the same as currants.

Houghton.* Pale red, a most hardy and reliable variety, extremely productive, perfectly hardy and of excellent quality, but rather small.

Downing. Light green, sweet and fine, a much larger variety and hence easier to pick and prepare for cooking or market, and on this account, we would advise the principal planting to be of this variety, although it is not quite as hardy as the Houghton.

Josselyn. This is perhaps the best of the large fruited varieties. Color, red, very healthy and productive. The nearest approach to the large European varieties of anything that will succeed in our western gardens.

RASPBERRIES

One of the most delicious and easily grown fruits. Should be planted in rows not less than 7 feet apart with the plants 3 feet apart in the row. There is little attention required but to keep the space between the rows well cultivated, and keep down such weeds as appear in the rows.

King. A very prolific bearer of large bright red berries of good quality. A stronger grower than the Loudon and equally hardy. Canes very free from rust and remarkably healthy. A good berry for home use and especially valuable for market, rapidly becoming very popular with the growers all over the state. We especially commend it. The red varieties like the King

all send up sprouts or suckers abundantly. The common method of cultivating the red varieties is to allow the plants to sprout in matted rows about 18 inches wide. All plants appearing outside these rows should be promptly treated as weeds. Many people object to such varieties as sprout and spread over the ground, but as these sprouts appear but once in the season and can



A COLUMBIAN RASPBERRY FIELD

be easily kept in check by the cultivation needed by these fruiting canes, and as they are among the hardiest and most delicious of all berries, we think them well worth planting in every garden.

Older. Black, hardy and reliable. Fruit of large size, sweet and with the smallest proportion of seed to

pulp of any black cap we have ever tried. This is by far the most reliable fruiter of its class, and is also a berry of the choicest quality, a rare combination. Does not spread by suckering.

Columbian. A very large, dark red or purple variety that is proving very popular all over the country. It is a first-class table fruit and the best of all raspberries for canning. An exceedingly valuable berry for the home garden, as like the black varieties it does not sucker, and produces well in dry seasons when other kinds fail. We especially recommend it. In planting this and the black varieties great care is necessary not to injure the bud in the center of the spreading fibrous roots, which is the center of life in this plant. If it be broken off or roughly trodden on the plant will likely fail to grow. It is also important in planting that this bud should not be covered more than an inch or so, as it has not the strength or vigor to push up through much soil. Lack of precaution in these two matters is the cause of the loss of such a large share of tip rooting raspberry plants.

BLACKBERRIES

None of the small fruits yield more abundantly than this, if the trouble be taken to cover it in the winter. This is easily done by removing a spadeful of dirt from one side of the hill and bending the canes in the root to the ground, and holding them there by a slight covering of dirt. We are inclined to think the blackberry requires a sandy soil in order to be most

highly profitable. Planting and care similar to the raspberry.

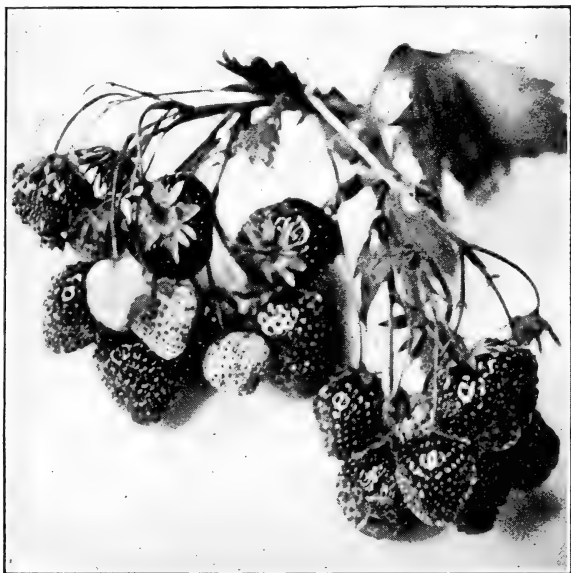
Ancient Briton. A variety superior to all others for the north.

STRAWBERRIES

The first fruit of the season and the most popular of all. In our climate, should always be planted in early spring. Lay out the rows 4½ feet apart, plants 1 to 2 feet apart in the row. Take care to plant just right, neither too deep nor too shallow. Shade each plant, if possible, with a shingle or bit of newspaper for a few days; this is especially important in late plantings. Pinch off all blossoms, and allow no fruit the first season. Don't plant in land that has been in grass or clover within three years, as in many soils the white grub infests such land and will be quite certain to destroy the plants. Do not allow the plants to mat too thickly in the row, but spread them out and make a row 2 feet wide. Hoe and cultivate quite often, killing the weeds when they are small. As soon as the ground freezes cover the bed with a sprinkling of clean straw put on thick enough to hide the plants. In the spring, if the plants seem able to come up through the straw it may be left on, if not, it should be raked into the space between the rows.

There are two classes of strawberries named after the character of their blossoms, Perfect and Imperfect. The former will bear if planted by themselves; the latter require a row of some perfect variety planted among them as often as every third row.

Fifteen years ago the imperfect varieties were of such superior productiveness that it seemed necessary to use them, although it made endless confusion and was the cause of more failures with beginners than all



A SINGLE BUNCH OF SENATOR DUNLAP

other causes combined. Since that time perfect varieties have been originated that excel even the best of the imperfect kinds in every valuable quality, making it entirely unnecessary to longer retain the so-called imperfect pistillate, or female varieties on the list. This

marks one of the great advancements of horticulture, and will result in almost doubling the chances of success of the beginner. All the varieties we describe are **perfect**, and any one of them will bear well planted alone.

For the home garden in our dry western soil, it is sometimes advisable to put the bed in the form of a square rod or two and take pains to water it under the mulch the second season, when the berries are maturing, and the crop is so likely to be cut short by dry weather. Two or three barrels from the well will almost insure a bountiful family supply. From a bed covering only a square rod of ground we have picked over a bushel of fruit that by careful account from the time we set the plants until we began to pick the berries had cost us only three hours labor to raise.

Lovett's Early. One of the earliest. Berry large, bright red, conical, firm, of excellent flavor, productive. The plant is healthy and makes sufficient runners for a good matted row. We have found this more productive than Johnson's Early and hence have put it in the place of that variety.

Bederwood. An early berry, of fine size, round form, light red, pleasant quality, rather soft for shipment, but immensely productive, and perhaps the most generally planted and reliable sort for home use all over the north.

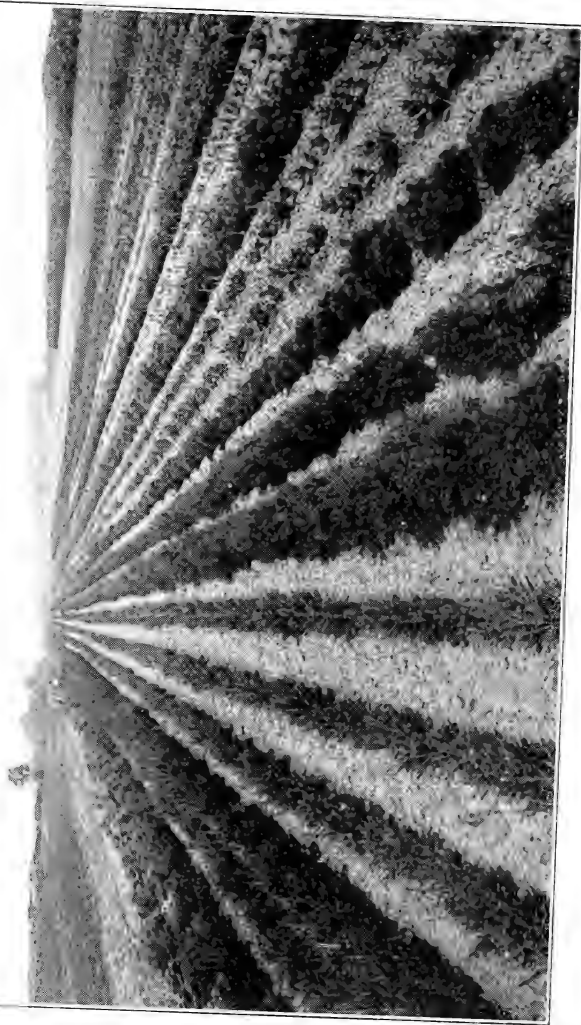
Senator Dunlap. A variety of medium season that has made a wonderful record all over this section the past few years. Of large size, round form, rich dark color, very firm, of fine quality, and the most satisfac-

tory in productiveness of anything we have tried. If we could have but one variety it would certainly be the Senator Dunlap.

Brandywine. Season late, of large size, fine round form, rich color, and exceedingly firm and solid, making a first-class shipping berry, and the very best in quality of any variety we grow.

EVERGREENS

Evergreens are rapidly coming into popularity for both ornament and shelter. They are a little more expensive than the deciduous trees, and require somewhat more care in transplanting, but when the right kinds are planted and they are given intelligent care they are the most useful of all trees in our northern climate, as they hold their foliage during our long, windy, cheerless winters, when it is most needed to break the force of storms and relieve the monotonous grey of the landscape. And there is absolutely no excuse for leaving our farm homes without the winter cheer of their warmth and beauty. Small transplanted trees set in any good corn land and cultivated with horse and hoe as a corn field, will grow rapidly. They will not thrive in grass or weeds any better than corn. Our own wind break is planted in double rows, 8 feet apart, trees 4 feet apart in the row. If planting again we would place the rows further apart. The only secret in handling evergreens is to keep the roots moist every second from the time they are out of the ground until they are planted again. In setting, be careful to pack the dirt about the roots with exceeding firmness, or the swaying



EVERY PRAIRIE HOME SHOULD HAVE AN EVERGREEN WINDBREAK

of the tops in the wind will loosen their hold on the soil. The surface should, of course, be left loose and open as a dust mulch.

For years past we have sent out the following plain and important directions for setting wind-break evergreens, which we insert here for the benefit of beginners:

TEN RULES FOR SETTING EVERGREENS.

1st. Take the trees from the delivery and as soon as you get home put them in your house cellar, without opening the package.

2nd. As soon as possible mark or stake out the place for the trees in land prepared as for a crop of corn.

3rd. Prepare a large pail or tub half full of mud about the thickness of common paint. Take it to the cellar, unpack the trees and place them in the pail with their roots in the mud.

4th. Keeping their roots in the mud, take the pail of trees to the place marked for them and begin setting them one at a time, a little deeper than they stood in the nursery, and as fast as the holes are dug.

5th. Do not use water in setting, but throw in fine moist dirt next to the roots and pack the dirt solid as you fill the hole, leaving only an inch or two of loose dirt on top.

6th. Cultivate the ground all summer, keeping it clean and mellow, just like a good corn field, or if single trees set in your yard, keep a space of 8 feet across mellow and free from grass and weeds.

7th. Use no manure. We have set evergreens in banks of clean sand and beds of pure clay with perfect success.

8th. Do not water them. But depend upon clean and regular cultivation.

9th. Chickens won't hurt them, but other stock must be kept away.

10th. LOOK OUT! If the roots of evergreens are exposed to the sun and air for a minute or two they are likely to die.

Scotch Pine.* Grows fast and resists drouth; makes one of the cheapest and quickest windbreaks of any evergreen, and should be planted largely all over the prairie regions. It is just as easy to make live as a box elder if the trees are handled according to the rules above given. Like all pines when it gets to be old it is inclined to lose its lower branches and the windbreak would be improved by planting a row of white spruce by the side of it ten years after the pines are set.

Norway Spruce. This is the tree that is so generally planted; it grows fast, and makes a fine wind-break on soils that are not too dry. We do not recommend its planting west of Albert Lea, as it is inclined to brown and fail in drouths, especially if planted in exposed situations.

White Spruce.* A most beautiful tree for the lawn, grows a little slower than the Norway, but every inch of it is a bright vivid green. It is easy to make live, and resists drouth wonderfully. The best type of this tree for general planting comes from Northern Minnesota and Wisconsin. The Black Hills form which is generally agreed to be the hardiest and most beautiful is also greatly sought after, although much slower in growth than the type above mentioned.

Arbor Vitae. A fine tree, when sheared, very pretty for hedges and screens. Succeeds well in certain locations, but no evergreen suffers more from drouth. Should only be planted in moist soils and sheltered places.

Balsam Fir. A favorite with many, very regular and handsome as a young tree, but somewhat unreliable as it reaches maturity. This with the Norway Spruce, White Pine, and even the Arbor Vitae, make very good trees east of Albert Lea, but are not as good as others for the western prairies.

Blue Spruce. This is the queen of ornamental evergreens, and seems especially adapted to the climate of the North Mississippi Valley from the lakes to the mountains and even far up in Manitoba. In all the time that we have had it at our place it has never shown an injury from winter's cold or summer's drouth. The color of the foliage of this tree varies from a light silvery green to as dark a shade as that of the Norway Spruce. The light shades are by far the most rare and valuable, and shine out on the lawn as if frosted with silver. The trees are usually graded according to color. "Shiners" are the extra choice; "Green" are the common dark green trees, otherwise just as hardy and handsome as any.

Concolor. One of the beauties from the Rocky Mts. that can be enjoyed by those who are able to plant it in a somewhat sheltered situation. It is as interesting and showy as the best specimens of the blue spruce, but lacks its rugged hardihood when planted in the open. A tree that deserves a much more general planting.

Jack Pine.* This is generally agreed to be the fastest grower and hardiest of our native evergreens. It is also exceptionally easy to transplant, these qualities making it a valuable species for wind-breaks on our western prairies. "Forestry in Minnesota" has the following to say of it: "It is the hardiest native evergreen we have, and is especially adapted to dry, loose soils where it has a wonderful power of resisting drouth. It is of rapid growth when young." Our latest experience confirms our good opinion of this tree. It will certainly satisfy those who wish something that will make a showing in the shortest possible time, and it is the only evergreen that can be safely set in a blue grass sod, and allowed to rustle for itself.

SHADE TREES

American, or White Elm.* The standard shade and street tree of America. Seems to be able to endure more hardship and abuse than even the oak, and is also one of the cleanest and freest from insect enemies of any of our native trees.

Linden.* One of the most reliable, hardy and drouth resisting shade trees on the whole list. Growth reasonably rapid, shade dense, blossoms exceedingly fragrant. Should have its trunk shaded for the first year or two after planting to prevent sunscald.

Ash.* The most reliable of all trees for the northwest. Stands well where most other deciduous trees fail from drouth. Not subject to the attack of insects or disease. A first-class lawn or street tree. Makes a

steady, good growth, and should be planted far more than it is.

Box Elder. Of very rapid growth, making a fine dense shade in perhaps the shortest time of anything that can be planted. In order to get an immediate effect it is frequently desirable to use a share of this tree and the soft maple in connection with the better kinds mentioned above.

Soft Maple. A rank growing tree, suited to deep moist soils. If trimmed so as to avoid making forks that split down in heavy winds, it becomes one of the most graceful and beautiful trees of our latitude.

Norway Maple. Very similar to our native sugar maple, but much more dense in foliage and enduring drouth far better. Trees planted thirty-five years are looking extremely well at Albert Lea, and are perhaps the most admired of any shade trees in our city. Especially noticeable in the autumn when it holds its magnificent foliage nearly two weeks after almost every other tree has taken on a bare and wintry appearance.

European White Birch. Very beautiful in winter or summer, with its white papery bark and finely divided spray, deserves a place on every lawn; makes a very pretty group when three or more are planted together.

Mountain Ash. Perfectly hardy, bears large clusters of fragrant blossoms, which are followed by handsome red berries that frequently hang on all winter. It is somewhat inclined to sunscald, which may be prevented by planting a flowering shrub to shade the trunk.

Catalpa. A rapid growing tree with magnificent tropical foliage, and large fragrant blossoms. Not as hardy as could be desired, but our trees are grown from a good strain, and likely to be far hardier than those sent out by the average nursery. One or two specimens should be tried on every lawn.

Bechtel's Double Flowering Crab. This we regard as the most valuable ornamental small tree that has lately been introduced. It is exactly like our native green fruited crab, and equally hardy and sweet scented, but the blossoms instead of being single are so double as to closely resemble little roses. So interesting and beautiful is this little tree that we would advise its planting by everyone. There is room for it even on a small town lot, where it would be far more in place than many of the larger growing trees that are commonly planted.

WEeping TREES

Cut Leafed Weeping Birch. The most graceful and desirable weeping tree known. Perfectly hardy, but in dry seasons should have one thorough watering in the fall. We have a very fine stock of this deservedly popular tree.

Wier's Cut Leafed Maple. A hardy and desirable silver maple, with delicately cut and divided foliage, and a form rivaling the beauty and grace of the weeping birch. One of the best trees of its class.

Mountain Ash, Weeping. Similar to the standard Mountain Ash, but with drooping, rambling habit, which

may be greatly improved by heading back and training to a denser and more regular head. Flowers and fruits freely.

NUT TREES

Black Walnut. The most desirable of the nut bearing trees for planting south of the latitude of St. Paul. Makes a fine lawn tree if the soil is not too dry and is well worth planting for its most excellent nuts which find ready sale on the market.

Butternut. A much hardier tree than the black walnut, but very liable to sunscald unless sheltered on the south side. May be planted as far north as Duluth. Bears nuts very soon, usually within six years after planting.

FOREST TREE SEEDLINGS

For groves and windbreaks, should be planted 4 feet apart each way; by this close, even planting they are encouraged to make a straight growth, and the sooner shade the ground so as to require no cultivation. At about eight years they can be thinned to 8 feet apart; an acre thus planted requires 2,720 trees.

We wish to introduce here a word of remonstrance against the common practice of allowing timber plantations or old orchards to be pastured. No practice is more certainly destructive to their health and vigor. In our dry climate it is absolutely essential that the soil about our trees should be of a cool, moist, spongy character, which can only be maintained after cultiva-

tion ceases by allowing the natural leaves and underbrush to cover the soil, and keep out stock of all kinds.

Ash.* The best of all trees for the dry western prairies. Does not quite keep up with the box elders as a young tree, but after ten years will grow much faster. Thinnings make excellent fuel, strong and durable poles, and the older trees most valuable timber for many uses above ground.

Box Elder.* Very useful to mix with more valuable trees in timber planting, as it grows very fast while young, shades the ground quickly and forces the slower trees to make a clean straight stem.

White Elm.* Almost equal to the Ash as a reliable tree for groves planted in dry soil. The above three kinds in about equal proportions, make a splendid mixture for a permanent timber lot, such mixed plantations doing better than those composed of one variety.

Soft Maple. Makes a strong growth for many years. Especially suited to moist soils where it will make a large amount of good firewood in about the shortest time of any variety.

Cottonwood. A very fast growing tree and very popular. Usually healthy and long lived when planted in single rows, but in upland soils likely to die out when planted in groves.

Laurel Leafed Willow.* Perfectly hardy even in Manitoba, nearly as rapid grower as the white willow, but unlike that valuable tree never injured by the willow worm. An occasional tree or branch is sometimes killed by a blight similar to that which affects the apple.

NORWAY PINE. THE TREE BEING CHOPPED CONTAINS A 50 FOOT LOG, 18 INCHES AT THE BUTT



We have a constantly increasing demand for cuttings of this tree.

Russian Golden Willow. A very hardy and useful tree for wind-break and timber plantations. Of more spreading form than the white willow, and with its golden yellow twigs makes an interesting variety that is especially noticeable in winter.

Norway Poplar. A variety of the cottonwood family that has been called "The Sudden Saw Log" and seems to have come to light for the purpose of averting the lumber famine that threatens the country. It has the habit of keeping the larger share of its timber in the body of the tree rather than wasting it in branches, and thus maintains the size of the log well up into the top of the tree. The tree itself is so straight and tapers so gradually that we have seen logs 60 feet long that had a difference of but 10 inches in diameter between the butt and the top. Prof. S. B. Green, of the Minnesota Experiment Station, says: "It is the most rapid growing tree on our grounds." Although related to the cottonwoods it does not shed cotton.

FRUIT BEARING SHRUBS

High Bush Cranberry.* Very similar to the Snowball in appearance, being ornamental in flower and exceedingly handsome when loaded with its coral red drooping berries later in the season. Perfectly hardy and worthy of a place in the cool, moist soils in which it thrives.

Dwarf Juneberry.* A valuable fruit for planting in the western garden as it needs little care and attention, and fruits very abundantly in all seasons, even when the more commonly cultivated fruits like strawberry and raspberry fail from drouth. Dewain Cook, of Cottonwood county, says of it: "The dwarf Juneberry is perfectly hardy everywhere, even in the most exposed locations. The fruit is good, the bushes ornamental, and not known to be bothered with any insect or disease. Those who fail to plant it are missing a good thing."

FLOWERING SHRUBS

Spirea Van Houttei.* This seems to come about as near perfection as any ornamental shrub that can be planted in the north. As hardy as the hazel brush, and sure to be loaded with a mass of white flowers in June of the year after planting. A graceful and attractive bush all the year. If you do not have this beautiful little shrub be sure and order it this season even if you do not plant anything else. We never knew it to fail to delight anyone who planted it.

Spirea Anthony Waterer. A much smaller bush than the Van Houttei, but having the valuable habit of blooming nearly all summer. It is of a dull red color and very valuable for variety.

Hydrangea. (Paniculata Grandiflora).* A hardy outdoor Hydrangea that blossoms in August when flowers are scarce. Its immense blooms sometimes measure nearly a foot in length, and last at least two weeks; needs no protection, but in order to secure the finest

blooms should be watered thoroughly about once a week as soon as it begins to bloom.

Syringa.* A vigorous handsome bush, bearing flowers with delicious orange blossom fragrance. Very ornamental. Sometimes makes a small tree as high as 20 feet.

Tartarean Honeysuckle.* A beautiful bush bearing a profusion of sweet scented blossoms. Does well in shady situation. We have the pink and the white.

Lilac.* Purple, White and Persian. These are the old fashioned shrubs that are familiar to all. The Purple and Persian Lilacs are excellent for low hedges and screens and should be planted in such quantities that their fragrant flowers may be gathered by the armful in their season.

Lilac, Madam Lemoine.* This is a new double white lilac that is as much superior to the old common white as could well be imagined. Begins to flower when a small bush with blooms nearly twice the size of the old white, double, fragrant, and as pretty as a hyacinth for cut flowers. Perfectly hardy and deserving the attention of all who are interested in ornamental planting.

Snowball. One of the old favorites that never can be displaced. Good rich soil and an abundance of moisture will greatly improve the bloom and general appearance of the bush. If inclined to get lousy douse the branches in a decoction of tobacco water.

Flowering Almond. A small shrub of medium hardiness that blooms profusely very early in the spring, when each twig has the appearance of being covered

with a mass of little roses. Very useful as cut flowers.

Dogwood. One of the best shrubs for shady places, also doing well in full sunlight. The branches turn to a brilliant blood-red color on the approach of winter, making the plant very showy at that season.

CLIMBING VINES

American Ivy.* A native of our state, perhaps the most hardy and desirable of any for covering porches or screens. Foliage turns a beautiful scarlet in the autumn. Ours is the self clinging sort that will climb a brick, stone or wooden wall without the assistance of wires or other support.

Honeysuckle, Scarlet Trumpet. The old garden favorite, blooms all summer producing the most brilliant pendant coral flowers. Should be found about every home.

Clematis Jackmani. Bears a large brilliant purple flower. Requires winter protection and considerable petting. Like all the clematis it likes a shady situation. Very popular and desirable.

Clematis Paniculata. This new white clematis is proving the most valuable of the recent additions to our ornamental list. It is of a vigorous, rugged nature that succeeds where given the least opportunity, and blooms in wonderful profusion in the latter part of the season. Will cover a porch, arbor or tree in a very short time, and in its blooming period, which lasts for weeks, is the most fragrant and interesting flower of its season.

Large trusses can be picked and will keep in the house for days, filling the rooms with its delicious odor.

ROSES

Tender Varieties.

Nearly all the old line of roses require winter protection, a good covering of soil being about the best that can be given them. The first three varieties if given good cultivation will bloom almost continuously throughout the summer. The others in this tender list bloom profusely in June. While we class these roses as tender, they are the hardiest and most satisfactory to be had, excepting the new Rugosas.

Gen. Jacqueminot. Dark red, double, fragrant. The most popular of its color.

Paul Neyron. Pink, very double and fragrant. The largest out-door rose in cultivation; a magnificent variety.

Black Prince. (Prince Camille). Very dark, rich velvety crimson, passing to intense maroon, shaded black; large full flowers, looking at a short distance as if really black; very handsome.

Madam Plantier. White, very double, fragrant. Frequently blooms very freely the same season set.

Harrison Yellow. A larger rose than the Persian Yellow, a freer bloomer, of a more agreeable fragrance and the more commonly planted of the two.



CONRAD F. MEYER. OCTOBER ROSES AND RIPE GRAPES ON THE
SAME TABLE

Queen of the Prairie. A climbing rose, bright rosy red, moderately double, very vigorous and healthy and a wonderfully profuse bloomer. The climbing rose that is so generally popular.

Baltimore Belle. The best white climber.

Crimson Rambler. We add this rose to our list on account of the exceeding brilliance of its effect, although it is not as hardy or easy to manage as the other climbers listed, and will need careful attention as to winter cover. Each separate rose is small, and with slight perfume, but blooming as they do in great crimson masses there is nothing in their season more showy.

NEW HARDY ROSES

The new Hybrid Rugosa roses can be grown all over Minnesota without winter protection, and are without doubt the most important addition to the family of the "queen of flowers" that has come to our northern gardens. The old line roses are subject to diseased foliage in our summers, their roots are unequal to our severe winters, and their general constitution is so weak as to require the petting of an expert gardener. The new Rugosas are not built on any such weak and doubtful plan. Inheriting a robust constitution from an ancestry inured to the hardships of the frigid climate of northern Asia, they have received a sufficient infusion of the blood of the best of the older cultivated kinds to give them a variety of form and color which in combination with the magnificent foliage, delicate fragrance and habit of perpetual bloom of their Rugosa parent has fitted them to fill the long felt want of a hardy garden rose for the cold north. We strongly advise our patrons to secure not only one, but the complete collection, as each has peculiar merits which will delight all lovers of the rose, and which we of the north are at last privileged to enjoy to the full. In order to illustrate their freedom of bloom, even during the autumn months, we have had several photos taken on Oct. 7th, four days

before the great freeze in 1909. On the table with them will be seen fine bunches of the Beta. Ripe grapes and ripe roses at the same time.



BLANC DE COUBERT, TAKEN WITH RIPE GRAPES OCTOBER 7, 1909

Blanc de Coubert. Purest paper white, of large size, often four inches in diameter, semi-double, produced in clusters, exquisitely fragrant, and with foliage of unrivaled richness. It is the first rose to bloom in

the spring, and blossoms may be picked from it every day throughout the summer, and until cut off by severe freezes. We have had this variety twelve years and never knew it to be injured by the severest winter. We hear of the beauty of rose hedges in California, and have long wished that our climate would permit us to enjoy such an out-of-door luxury, but we have never before had anything we could offer for this purpose to the people of the north, the old sorts being so tender and subject to disease. Now we have it. A rose with a foliage far ahead of anything California can boast, a strong grower, and with all the other good qualities, making a perfect low hedge full of bloom all summer.

Sir Thomas Lipton. Pure white, fragrant, smaller than the Blanc, and not quite as free a bloomer, but perfectly double, and lasting better as a cut flower, much resembling the Madam Plantier in form of bloom.

Conrad F. Meyer. Clear silvery pink, of largest size, almost as large as Paul Neyron, very double, choicest fragrance, continuous bloom, produced singly instead of in clusters like most of this class of roses. Bush thrifty and vigorous. An exceedingly choice rose, but considerably less hardy than the others of this group, and needing winter protection, while this superb rose is much the least hardy of its class, it is much easier to grow than the best of the hybrid perpetual class to which Gen. Jac. and Paul Neyron belong, and stands fully equal to them in all the qualities that make a first class flower.

New Century. Rosy pink shading to almost a red center, good size, fine fragrance, perfectly double, produced in clusters and exceedingly free blooming. A

very interesting and distinct variety, and one of the hardiest.



SIR THOMAS LIPTON, OCTOBER 7, FOUR DAYS BEFORE THE
GREAT FREEZE OF 1909

Hansa. Deep violet red, very large, perfectly double, fragrant. In this fine variety unlike most of its class the buds of each cluster open at about the same time, giving the effect at a distance of a single rose of

immense size. The foliage is particularly dark rich green and the bush absolutely hardy. A beauty every way. It is perhaps the best all around rose for general planting.



HANSA. A SINGLE CLUSTER

Agnes E. Carmen. Deep scarlet red, a peculiar and interesting shade, resembling the Gen. Jac., semi-double, blooms freely throughout the summer, its glossy foliage being very distinct and handsome. Although not quite

as hardy as several of the above kinds it has stood unprotected the past three winters of northern Minnesota.

PEONIES

Peonies. We have in recent years spent large sums in order to secure the very choicest varieties of this the most showy, fragrant, and useful flower of our climate. The cultivation of the peony is the easiest possible, resembling the pie plant and asparagus of the vegetable garden. The root should be planted so that the bud will be about three inches below the surface, at a distance of about two or three feet apart each way. In the list below we begin with white and pass regularly through the shades to the deepest red. A collection of these six varieties carefully planted in rich soil, and given good cultivation would create a sensation in any neighborhood. We describe nothing more hardy, beautiful and easier grown. No place is complete without a good collection of the different colors. It should be kept in mind, however, that although likely to give some beautiful blooms the year after planting, this flower does not arrive at its full size and form until the third year, and not even then unless given a very rich soil.

Festiva Maxima. Pure white flecked here and there with crimson, fragrant, of largest size, specimens 7 inches across having been produced, blooms very freely and makes a magnificent bouquet, generally conceded to be the queen of peonies.

Marie Le Moine. Ivory white, blooming later than the above, and of particularly fine fragrance. This is a special favorite at the nursery, many being inclined to give it the first place.

Achillea. Shell pink fading to white, good size, fine form, blooming very early and freely. This is a particularly valuable kind, producing more flowers than any other we know. If compelled to choose but one variety it would be this.

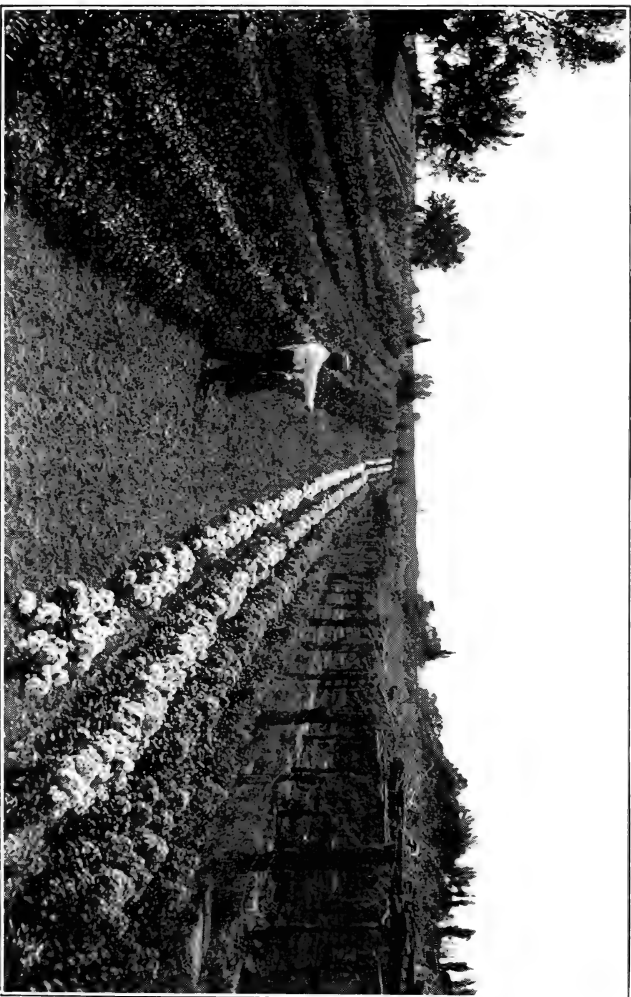
L'Esperance. A very early flowering sort of exquisitely shaded satiny pink, very fragrant, especially valuable in the northern states, as it is a strong, hardy and robust plant. Peony specialists put it on the "diamond list."

Grandiflora Rubra. Red, of medium season, and most magnificent size. The most striking variety in our list. Immense full flower, extremely solid and compact, so double that when fully opened it has the form of a perfect globe. If there is anything grander, we have never seen it.

Louis Van Houttei. Dark red, the richest color of our collection, medium season, very early and free blooming. The king of the dark reds, as seen at a distance it fairly glows like a ball of fire. Exceedingly striking and effective in bouquets.

PERENNIAL PHLOX

Those who know only the old fashioned magenta phlox, do not know the possibilities of the showy new varieties for landscape effect. See description of named



A RUBBER OF PERENNIAL PULON IN SEPTEMBER

kinds below. They are all perfectly hardy, enduring our severest winters without protection, and when once planted will last a life time if a little pains be taken to divide the roots once in three to five years. Our collection embraces the choicest of the modern varieties. The four planted side by side in rows make a gorgeous ribbon on the lawn.

Madam Pape Carpentiere. Pure white, fine heads formed like a snowball, with individual flowers as large as a silver dollar, plant dwarf.

Beranger. Bright rose pink with lighter eye, heads of large size, perfect form, plant of medium height.

Lothair. Bright red, pyramidal head, as brilliant a color as can be found among flowers, and the most effective at a distance, the tallest of the collection.

Eclaireur. Dark purple red, with lighter eye, makes a large broad head, endures drouth and hardship well, in height midway between the two first named.

MISCELLANEOUS

Dahlia. A well known and very popular flower that blooms freely during all of the latter half of the summer, and is especially adapted to the climate of the Northwest. We offer the three standard colors in beautiful double named varieties, white, yellow and red. The cultivation and care both summer and winter is almost identical with the potato.

Gladiolus. We raise large quantities of this hardy and useful flower, which may be grown as easily as the potato and will give a most brilliant show from August till frost. Bulbs must be dug before freezing weather, and kept in a frost proof place over winter.

Tulip. The queen of early flowers, blooming as soon as the ground thaws, and before heavy frosts have ceased. A bed of our large rich colored kinds will bloom for years without resetting, and make the doorway brilliant while everything about is dull and wintry. The tulip can only be set in September and October.

Asparagus. We urge all to plant a bed of this hardy, easily cultivated vegetable. The only secret of success is in the liberal use of manure. Once planted it lasts a lifetime, and cares not a pin for drought or cold. On application we send a leaflet giving complete directions for cultivating.

Pie Plant. The Mammoth or "Wine Plant." An old garden favorite that seems as indispensable now as it did to our grandmothers. Requires the richest soil in order to reach its best size and quality.

HEDGES

Buckthorn. The hardiest and best stock fence, and one that can be grown anywhere in the north. Will bear the shears so as to be kept down as low as five feet, or will make a combined fence and windbreak fifteen feet high. Foliage a handsome rich dark green, growth thrifty and plants do not spread by suckers. Nothing

more reliable even for the Dakotas on our lists. Plant one foot apart and keep well sheared till the hedge gets a fine bushy bottom.

Berberry Thumbergii. The best low hedge for lawns and parks, becoming very popular all over the country. Makes a thorny hedge 2 to 4 feet high that stands well either in the shade or sun. Handsome foliage that works well in bouquets and turns to brilliant shades of red in autumn. Bears bright coral red berries in great profusion. It can be sheared into a perfect wall of foliage, and leaves nothing to be desired for a low border. Plant 1 foot apart.

FUNGICIDE

Bordeaux Mixture I

{ Copper sulfate (*blue vitriol*) 4 pounds.
Quicklime (*not air slaked*) 4 pounds.
(Of dry air slaked lime or hydrate of lime
one-fourth more.)
{ Water to make 50 gallons.

Dissolve the copper sulfate in about two gallons of hot water, contained in a wooden vessel, by stirring, or even better by suspending the sulfate contained in a cheese cloth sack, in a large bucketful of cold water. With the cold water and cheese cloth bag a longer time is required. Pour the sulfate solution into a barrel or tank used for spraying, and fill one-third to one-half full of water. Slake the lime by addition of a small quantity of water, and when slaked cover freely with water and stir. Pour the milk of lime thus made into the copper sulfate, straining it through a brass wire strainer of about 30 meshes to the inch. Pour more water over the remaining lime, stir and pour into the other; repeat this operation until all the lime but stone lumps or sand are taken up in the milk of lime. Now add water to make 50 gallons in the tank. After thorough agitation the mixture is ready to apply. The mixture must be made fresh before using, and any left over for a time should be thrown out or fresh lime added.

